

- Faculté des sciences
- [www.unine.ch/sciences](http://www.unine.ch/sciences)

### Molecular methods (3BL2195)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en biologie</b>	<b>Cours: 7 dj</b>	Voir ci-dessous	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

#### Période d'enseignement:

- Semestre Automne

#### Equipe enseignante

LONGONI Fiamma  
VENKATASALAM Shanmugabalaji  
Assistants

#### Contenu

Modern molecular biological methods are now so powerful that they have become indispensable in practically all areas of biology. For one thing, the molecular biology toolbox allows us to study genes and their products in isolation. In the "Molecular Methods" course we will head for the lab and see how a protein can be made in the lab starting from a gene. To do this, the coding DNA (cDNA) of a protein of interest will be amplified by PCR and inserted into a suitable expression vector. In the following, we will use this vector for recombinant protein expression in bacteria. This course offers an introduction to the modern molecular biology toolbox and will be of relevance for the different specialization modules in the Master of biology. Both practical and theoretical aspects will be discussed.

#### Forme de l'évaluation

CA (graded) during the semester.

In case of insufficient grade, a reexamination must be registered at one exam session, same year and coordinated with professor (not in Pidex).

#### Documentation

Will be available on Moodle

#### Pré-requis

Bachelor in Biology

#### Forme de l'enseignement

Practical course

#### Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Explain an experimental plan
- Solve Molecular biology problems
- Assimilate molecular biology methods

#### Compétences transférables

- Develop hands-on, pro forma modelling skills using Excel
- Communicate results orally
- Manage a project
- Carry out critical and evidence-based analyses